



Gold occurrences in the Bigstone Lake greenstone belt



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Summary

The Bigstone Lake greenstone belt (BLGB) forms part of the northwestern Superior province in east-central Manitoba. The Manitoba Geological Survey (MGS) recently selected the BLGB for a geological mapping program to document its bedrock geology (including areas that were previously unmapped), and to provide a modern assessment of its mineral potential. Recent findings by the MGS—in addition to occurrences previously documented by the Geological Survey of Canada and Noranda Exploration Company Ltd.—indicate widespread and locally high-grade gold mineralization in the area (Figure 1). These results could inform new economic development partnerships between the mineral exploration sector and First Nations communities of the Island Lake region.

Known gold occurrences in the BLGB are scattered around the east shores of Bigstone Lake and along an east-southeast trend through the centre of Knight Lake (Figure 2). The gold occurs mostly in quartz-carbonate-sulphide veins hosted by late brittle-ductile shears, including the Diamond Queen veins (discovered in the 1930s; Assessment File 91148) and the “Root showing” discovered by Noranda in the 1980s (Assessment File 94511 and others). Recent MGS mapping revealed a number of previously undocumented gold-bearing veins in the area that range from a few centimetres to two metres wide, and confirmed that the controlling structures are related to topographic lineaments visible in aerial imagery and topographic data.

New and historical mapping results compiled to date would readily support surface and subsurface exploration for gold mineralization near the known occurrences, including new structural targets and related exploration suggestions outlined in Rinne (2017). Detailed exploration work in the BLGB was last undertaken between 1986 and 1993; there are currently no active mineral dispositions in the area.

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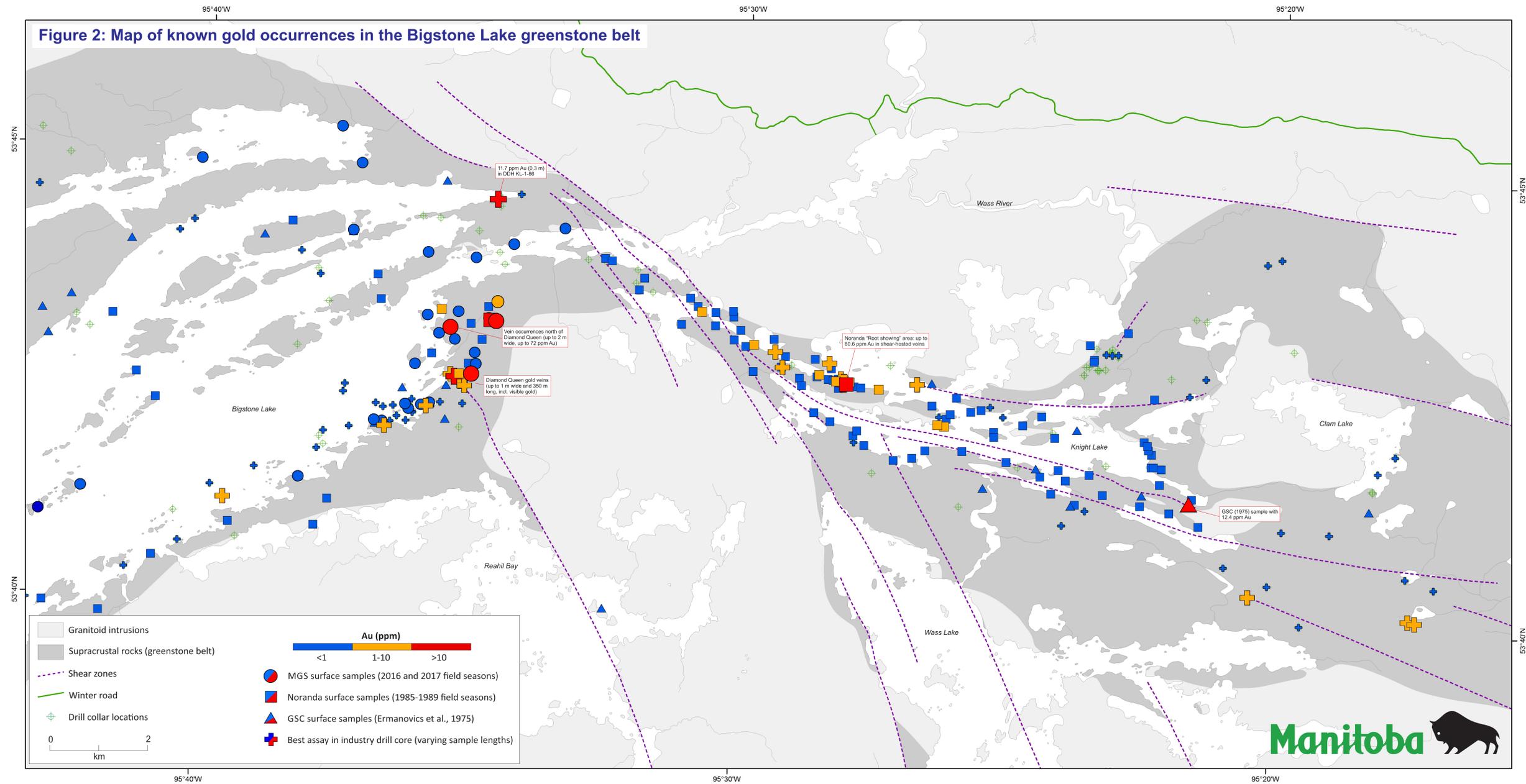
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Figure 1: Photos of shear-hosted quartz-carbonate-sulphide-gold veins and associated alteration in the Bigstone Lake greenstone belt



Figure 2: Map of known gold occurrences in the Bigstone Lake greenstone belt



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